AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (Currently amended): A pharmaceutical dosage comprising:

a porphyrin, and

a chemotherapeutic agent,

wherein said chemotherapeutic agent is not a polyamine, polyamine analog, cyclic polyamine, cyclic polyamine analog, dioxonaphthoquinone, or dioxonaphthoquinone derivative;
and wherein the chemotherapeutic agent is selected from the group consisting of antitumor antibiotics, doxorubicin, bleomycin, dactinomycin, daunorubicin, epirubicin, idarubicin, mitoxantrone, mitomycin, epipodophyllotoxins, etoposide, teniposide, antimicrotubule agents, vinblastine, vincristine, vindesine, vinorelbine, other vinca alkaloids, taxanes, paclitaxel (taxol), docetaxel (taxotere), nitrogen mustards, chlorambucil, cyclophosphamide, estramustine, ifosfamide, mechlorethamine, melphalan, aziridines, thiotepa, alkyl sulfonates, busulfan, nitrosoureas, carmustine, lomustine, ~~and~~ streptozocin, alkylators, altretamine, dacarbazine, procarbazine, temozolamide, folate analogs, methotrexate, purine analogs, fludarabine, mercaptopurine, thioguanine, adenosine analogs, cladribine, pentostatin, pyrimidine analogs, capecitabine, cytarabine, floxuridine, fluorouracil, gemcitabine, substituted ureas, hydroxyurea, camptothecin analogs, irinotecan and topotecan, topoisomerase I inhibitors, topoisomerase II inhibitors, and anthracycline antibiotics; wherein the porphyrin is covalently linked to the chemotherapeutic agent;

and all salts, hydrates, and stereoisomers thereof;

wherein the porphyrin-chemotherapeutic agent retains the chemotherapeutic effect of the chemotherapeutic agent in unconjugated form, and the dosage of the porphyrin-chemotherapeutic agent has reduced toxicity compared to the chemotherapeutic agent in unconjugated form.

Claim 2 (Canceled)

Claim 3 (Previously presented): The composition of claim 1, wherein the porphyrin is covalently linked to the chemotherapeutic agent via a linking group.

Claim 4 (Previously presented): The composition of claim 1, wherein the porphyrin is selected from the group consisting of mesoporphyrins, deuteroporphyrins, hematoporphyrins, protoporhyrins, uroporphyrins, coproporphyrins, cytoporphyrins, rhodoporphyrin, pyrroporphyrin, etioporphyrins, phylloporphyrins, heptacarboxyporphyrins, hexacarboxyporphyrins, pentacarboxyporphyrins, and other alkylcarboxyporphyrins; and derivatives thereof.

Claim 5 (Previously presented): The composition of claim 4, wherein the porphyrin is selected from the group consisting of derivatives of deuteroporphyrins.

Claim 6 (Previously presented): The composition of claim 5, wherein the porphyrin is selected from the group consisting of sulfonic acid derivatives of deuteroporphyrins.

Claim 7 (Previously presented): The composition of claim 4, wherein the porphyrin is a mesoporphyrin.

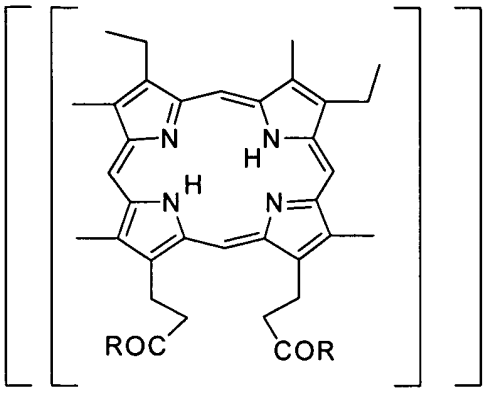
Claim 8 (Previously presented): The composition of 7, wherein the porphyrin is mesoporphyrin IX.

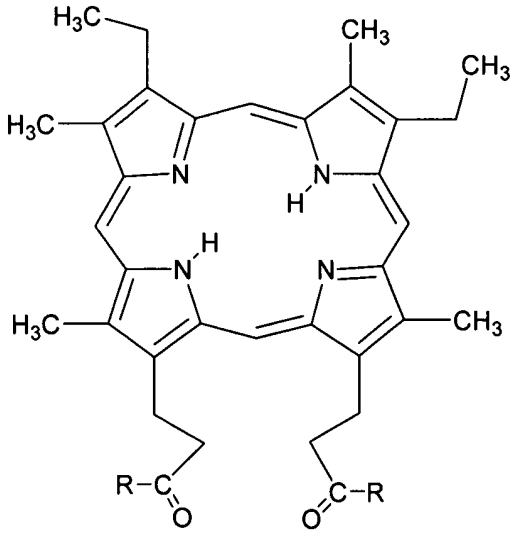
Claim 9 (Canceled)

Claim 10 (Previously presented): The composition of claim 1, wherein the chemotherapeutic agent is doxorubicin.

Claim 11 (Previously presented): The composition of claim 1, wherein the chemotherapeutic agent is doxorubicin and the porphyrin is mesoporphyrin IX.

Claim 12 (Currently amended): The composition of claim 11 of the structure:





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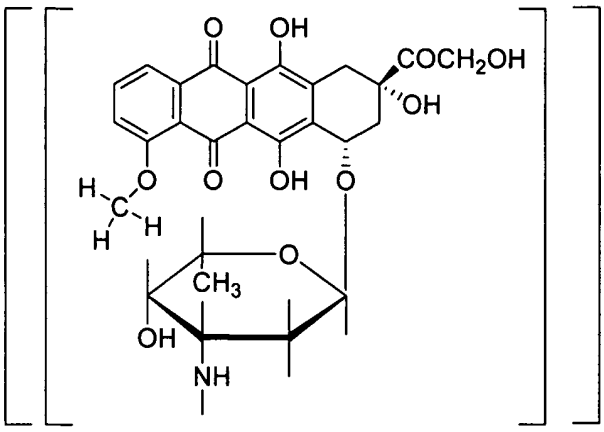
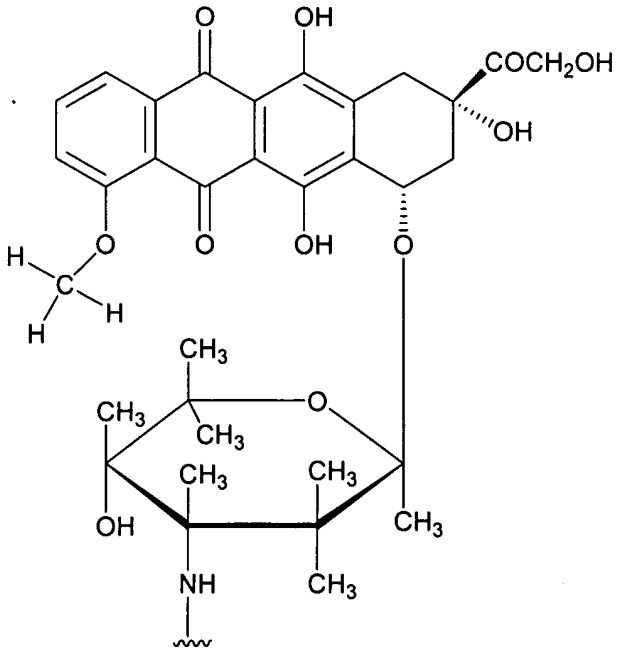
wherein R is





Claims 13-15 (Canceled)

Claim 16 (Previously presented): A method of making a composition of claim 1, comprising forming a covalent bond between a porphyrin and a chemotherapeutic agent.

Claim 17 (Previously presented): A method of making the composition of claim 12, comprising reacting doxorubicin with mesoporphyrin IX in the presence of a reagent that causes an amide bond to form, said amide bond form by reaction of a mesoporphyrin carboxyl group and a doxorubicin amino group.

Claim 18 (Previously presented): The method of claim 17, wherein the reagent that causes an amide bond to form is selected from the group consisting of uronium and phosphonium reagents and carbodiimides.

Claims 19-32 (Canceled)

Claim 33 (Previously presented): A composition comprising the composition of claim 12, formulated for oral administration.

Claim 34 (New): The composition of claim 1, additionally comprising a pharmaceutically acceptable carrier.

Claim 35 (New): The composition of claim 12, additionally comprising a pharmaceutically acceptable carrier.